

Appl. No. 09/661,214
Amdt. dated August 17, 2004
Reply to Office action of June 7, 2004

REMARKS/ARGUMENTS

Applicant respectfully requests reconsideration and allowance of the pending claims. Claims 1, 3-30 remain in prosecution, claim 2 has been cancelled.

Claims 1-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nord (U.S. Pat. No. 5,600, 793) in view of Tetrick et al. (U.S. Pat. No. 4,570,220) and further in view of official notice. Although not expressly stated in the Office action, the remaining claims, 11-30 also seem to be rejected under 35 U.S.C. 103(a) in view of the above references and official notice(s) taken by the Examiner.

Independent claim 1 has been amended to further clarify that what is claimed is a method for training a communication link in order to correct for errors (e.g., data inversion, lane skewing, lane order errors, etc.) that may be caused by the communication link. The cited Nord reference teaches a method for bidirectional data transfer between parallel ports comprising a simple handshake protocol for data transfer between the ports. Nord fails to provide any teaching or suggestion of a communication link training sequence for use in correcting for errors caused by the communication link as claimed. The cited Tetrick et al. reference is directed to a data transfer method for transferring data between resources using both a parallel and serial bus. Although Tetrick et al. discusses handshaking techniques in order to transfer data between the resources using different bus architectures (serial and parallel), it also fails to teach or suggest using a link training sequence for correcting link errors as claimed in claim 1-10.

As to the official notice taken regarding multiple lanes and a lane identifier, it also fails to add anything with regard to using link training sequences as claimed by the Applicant and as discussed above. Although in page 4 of the Office action, it is stated that the motivation to combine the official notice material with the Tetrick et al. and Nord references is "of utilizing the bandwidth of the communication link more efficiently," it seems one of ordinary skill in the art would not have had this motivation to combine given that both

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Nord and Tetrick et al. are dealing with well defined parallel and/or serial bus architectures which would not have any need for a lane identifier as used by some embodiments of the present invention. Taken in combination, the cited references simply fail to teach or suggest that which is claimed in claims 1-12.

Since the cited references and official notice material when viewed individually or collectively, fail to teach or suggest a link training sequence for correcting link errors as now claimed, claims 1-12 are believed to be in condition for allowance.

With specific respect to the comments regarding dependent claims 4-12, Applicant is not aware of what "specifics of a particular communication protocols" is being referred to. For example, with regard to dependent claim 9, Applicant is not aware of any communication protocol that teaches or suggests a step of transmitting a second link training sequence from first and second ports upon synchronized receipt of a first link training sequence at the first and second ports.

Independent claim 13 has also been amended to further clarify the claimed invention. As now presented, claim 13 claims a method for training a link between first and second ports in order to correct for errors that may be caused by the link. The claim recites among other things, transmitting a first link training sequence of code groups from the first port and the second port, wherein the first port and the second port are configured to send and receive data on a plurality of data lanes, and the first link training sequence of code groups contains a lane identifier of at least one of the plurality of data lanes. Also, synchronizing the receipt of the first link training sequence at the first and second ports; and transmitting a second link training sequence of code groups from the first and second ports upon the synchronized receipt of the first link training sequence at the first and second ports.

The cited references and official notice taken individually or in combination fail to teach a method as claimed in claims 13-21. As previously mentioned, none of the references teach or suggest a link training sequence for helping the ports correct for errors caused by the communication link as taught

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and claimed in the present invention. Furthermore, none of the references taken individually or together teach or even suggest synchronizing the receipt of the first link training sequence at the first and second ports and the transmitting of a second training sequence of code groups from the first and second ports upon the synchronized receipt of the first link training sequence. As such, claims 13-21 are believed to be in condition for allowance.

With regard to claims 22-30, the same arguments apply as to the cited references and official notice. Furthermore, none of the references taken individually or together teach or even suggest using a second link training sequence to indicate that a receiver in the port that transmitted the second link training sequence is configured. As such, claims 22-30 are believed to be in condition for allowance.

With specific reference to the statement in page 8 (1A) of the previous Office action that Applicant argued each reference individually is not well founded, given that as one example, in page 8 of the March 11th amendment, Applicant argued clearly that "As can be appreciated by one of ordinary skill in the art a bus request signal is not a training sequence, and an agent arbitration number is not an Identifier of a lane. Thus, a modification of Nord by Tetrack, even if feasible, would not result in the claimed combination." Other instances of arguing against the combination asserted by the Examiner are also to be found in the previous amendment.

Applicant respectfully requests reconsideration and allowance of the pending claims. If the Examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-

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Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

Respectfully submitted,



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